Extending Intellectual Property

EXTENDING INTELLECTUAL PROPERTY: PRODUCERS *v* USERS

INTRODUCTION

There have been three Copyright Acts this century — in 1911, 1956 and 1988. Given this track record, it might have been reasonable to expect the most recent of these statutes to have had a life of a quarter-century or so. But, only five years after it came into force on 1 August 1989, the 1988 Act has already undergone significant amendment, and it is certain that there is much more to come before the century is out.[1] The fate of the 1988 Act — which in many ways is actually a very good piece of work[2] — typifies what has been a very intensive period of activity in the whole field of intellectual property. Most of the changes to the Act have or will come about as a result of the increasing role played by the European Community in the formulation of intellectual property law and policy. Other international initiatives — particularly the GATT agreement concluded on 15 December 1993 — also have an impact on copyright and other parts of intellectual property. These changes tend to be concerned with the development of modern technology in a number of different fields: the amount of change is driven by the perceived needs of European and world industry and commerce, and also by a constantly fluctuating debate being conducted around the world about the extent to which development and innovation should be or is rewarded by the grant of intellectual property rights on the one hand, and on the other, the way in which intellectual property rights can be used to stifle (or at least restrict) those very things which it is supposed to encourage.

There is a general trend in the Western world to strengthen intellectual property rights to protect producer interests. The reason is not hard to discover, and is often quite explicit in statements of governmental policy. Western economies are increasingly based upon their world leadership in the production of ideas and their expression in various forms, whether technical or cultural. Given the existing international framework of intellectual property, which means that most forms of rights can be exploited on a global basis, the strengthening of intellectual property serves Western economic

1. For the amendments see Broadcasting Act 1990, s 179; Copyright (Computer Programs) Regulations 1992 (SI 1992/3233). The Trade Marks Bill introduced in the House of Lords on 24 November 1993 proposed amendments to ss 114, 204, 231 and 280 of the 1988 Act as well as repeal of ss 282-284, 286 and 300. The future amendments arise from the EC Directives discussed below. Note also the Draft Directive on the Legal Protection of Industrial Designs (COM(93) 344 final, OJ, C345, 23.12.93, p 14) published on 3 December 1993, implementation of which may also require amendment of the 1988 Act.
2. Note, however, the rather negative view of the 1988 Act expressed by the editors of the latest edition of *Copinger and Skone James on Copyright* (13th ed, 1991), p vi: "Apart from the size of the Act, its change of format and its new provisions, it does not help that some comparatively simple matters have been made more difficult".

interests very well. The GATT agreement of 15 December 1993 includes an Agreement on Trade-Related Aspects of Intellectual Property (TRIPS), the aim of which is to secure an ever-wider acceptance of minimum criteria for national intellectual property systems.[3] Ability to enter the new world of international trade will depend on willingness to accept and enforce intellectual property as defined in the Agreement. Failure to comply will lead to the imposition of sanctions for enforcement by the new World Trade Organisation, to which there is nothing comparable in the present international intellectual property systems.

But this attempt to establish a system driven mainly by a desire to protect the producer has met unsurprising resistance from the developing world, which sees yet another device by which the developed world seeks to maintain the technology, education and culture gaps and to control information transfer on its own terms. It is a debate which spilled over into the Rio Biodiversity Treaty of 1992, which recognised that developing countries had special needs of access to relevant technologies if biological diversity were to be maintained. The Treaty provides for the transfer of technology (including biotechnology) to this end, and says that relevant patents and other intellectual property rights shall be made "supportive" in the Treaty's objectives. But the Treaty also says that technology transfer and access "shall be provided on terms which recognise and are consistent with the adequate and effective protection of intellectual property rights".[4] The basic conflict is encapsulated in these few words, and it is on the resolution of the conflict that the success or otherwise of the Rio Treaty may ultimately depend.

This paper will focus mainly on copyright and related rights, because currently in the United Kingdom it is here that the greatest amount of change seems to be taking place. But some of the other areas of intellectual property in which the trends just mentioned are clearly identifiable will be discussed first.

BIOTECHNOLOGY

Biotechnology is the prime example of producer-driven change. For many years the extent to which living matter can be the subject of intellectual property rights has been fairly closely confined. Under the Patents Act 1977 (following the European Patent Convention 1973) patents cannot be granted for any variety of animal or plant or any essentially biological process for the production of animals or plants.[5] Patents can however be obtained for micro-biological processes — that is to say, those involving microscopic life-forms — and the products of such processes,[6] while there is also a special regime of protection for plant varieties under the Plant Varieties Act

3. For the Agreement on Trade-Related Aspects of Intellectual Property Rights, including Trade in Counterfeit Goods, see GATT document MTN/FA II-A1C.
4. For the text of the Rio Treaty see (1992) 31 *International Legal Materials* 818 ff.
5. Patents Act 1977, s 1(3)(b); European Patent Convention 1973, Art 53(b).
6. *Ibid.*

1964 as amended.[7] These long-established limitations are now being stretched because as a result of costly research and development it has become possible to develop and manipulate living matter which does not fall within the categories of micro-biological processes or plant varieties. The key to this has been the ability to recombine the elements of living creatures' DNA, thereby enabling certain characteristics of the creature to be strengthened and then reproduced naturally through the creature's propensity to reproduce itself. Thus repetition of the initial steps in recombining the DNA becomes unnecessary. The most famous example is the Harvard "onco-mouse"; this is a creature which is the product of genetic engineering rendering it subject to the development of cancers, and which is used for purposes of cancer research. Despite the prohibition of patenting animal varieties, it has been held by a Board of Appeal in the European Patent Office (reversing the Examining Division) that the mouse is patentable. This was on the basis that it was not a new variety of mouse, and that the European Patent Convention does not prohibit the patenting of animals as such. The decision of the Board of Appeal is explicitly based on an interpretive approach which takes into account not only the legislative intent at the time the rule in question was made but also the presumed intent in light of later circumstances.[8] As United Kingdom courts ought to take EPO decisions into account,[9] it seems certain that the Harvard mouse case will be a basis for approaching the equivalent provisions of the Patents Act 1977.

It is quite clear in this case that the EPO is responding to pressure to make the products of biotechnology patentable, a pressure reflecting the extent of the investment in research and development in this field. It is a pressure which is making itself felt in law reform in other parts of the world such as the United States and Japan. There has also been an EC response in the form of a biotechnology Directive, which in its current form provides that "biological material, including plants and animals as well as parts of plants and animals, except plant and animal varieties as such, shall be patentable" under national laws.[10] But the exclusion of plants, animals and biological processes from patentability is allowed under the TRIPS agreement, although the position is to be reviewed four years after the agreement enters into effect.[11]

7. Plant Varieties and Seeds Act 1964 as amended by the Plant Varieties Act 1983. See also the Plant Varieties Convention 1961 (UPOV), most recently revised in 1991, and the Draft EC Council Regulation on Community Breeders' Rights (OJ, C244, 28.9.90, p 1).
8. T19/90 HARVARD/Onco-mouse, OJ EPO 1989, p 451 (decision of the Examining Division); OJ EPO 1990, p 476; [1990] EPOR 501 (decision of the Board of Appeal); [1991] EPOR 525 (Board of Appeal). See further Paterson, *The European Patent System: The Law and Practice of the European Patent Convention* (London, 1992), paras 7.51-7.54, and Nott, 'Patent protection for plants and animals', [1992] 3 *European Intellectual Property Review* (henceforth *EIPR*) 79. Opposition proceedings are now underway: see Jaenichen and Schrell, 'The Harvard Onco-mouse in the opposition proceedings in the EPO' [1993] 9 *EIPR* 345.
9. *Gale's Application* [1991] RPC 305, 322, per Nichols LJ.
10. Political agreement on the Biotechnology Directive was reached by a qualified majority on 16 December 1993. For the most recent published text see OJ, C44, 16.1.93, p 36.
11. Article 27(3)(b).

SUPPLEMENTARY PROTECTION CERTIFICATES FOR PHARMACEUTICALS

There has also been an EC response to pressure to extend the well-established protection of patents in the field of pharmaceuticals. For many years the pharmaceutical industry has been concerned that the 20-year period of patent protection is insufficient to guarantee drug producers a full return on their research and development costs. This is because drugs, once patented, are not put on the market immediately but must undergo a lengthy period — often as much as 10 years — of testing for safety and other factors. Hence the demand for supplementary protection certificates, introduced in 1992 under an EC Regulation and implemented by statutory instrument in the United Kingdom with effect from the beginning of 1993.[12] Admittedly these certificates only extend the period of patent protection for a maximum of five years, but nonetheless the development strengthens the hand of the original producer significantly. In addition, as a recital to the Regulation notes, "such arrangements should enable the Community pharmaceutical industry to catch up to some extent with its main competitors who, for a number of years, have been covered by laws guaranteeing them more adequate protection".

COMPUTER TECHNOLOGY

This trend of modifying or developing intellectual property rights in favour of producers is not confined to patents. Computer technology, much (although not all) of which cannot be covered by patents for a variety of reasons,[13] has instead received protection either through the creation of new forms of intellectual property — for example, the semiconductor topography right invented in the USA in 1984 and then exported throughout the world[14] — or by the extension of existing forms such as copyright. In both approaches the EC has played a full part through the issue of Directives ensuring a harmonised approach throughout the Community. Thus the protection of semiconductor topographies was harmonised by a Directive in 1987, while a 1991 Directive has now produced a European regime of copyright protection for computer programs.[15] Both Directives, like the

12. EC Regulation 1768/92, OJ, L182, 2.7.92, p 1, implemented in the United Kingdom with effect from 2 January 1993 by the Patents (Supplementary Protection Certificate for Medicinal Products) Regulations 1992 (SI 1992/3091).
13. See Dworkin, 'The patentability of computer software', in Reed (ed), Computer Law (2nd ed, London, 1993) pp 131-60; Paterson, *European Patent System*, paras 7.11-7.23, for discussion and decisions on the patentability of software.
14. For discussion of which see Stewart, *International Copyright* (2nd ed, 1990) pp 333-5; Hart and Reed, 'Design right and semiconductor chip protection', in *Computer Law*, *supra*, n 13, pp 164-5. For semiconductor topographies in TRIPS see Articles 35-38.
15. The Topography Right Directive was EC Council Directive 87/54 (OJ, L24, 27.1.87, p 36); the Computer Program Directive was EC Council Directive 91/250 (OJ, L122, 17.5.91, p 42).

Regulation on supplementary protection certificates, were implemented by statutory instrument in the United Kingdom.[16]

TRADE MARKS

Again, trade mark law in the Community is being harmonised under a 1989 Directive which is the first step towards the ultimate goal of a Community Trade Mark (a goal which has turned out to be less unattainable than the Community Patent).[17] In Britain this reform is being carried out by Act of Parliament replacing the Trade Marks Act 1938. The Directive should have been implemented by 31 December 1992 but lack of parliamentary time prevented the publication of a Bill until the beginning of the 1993-94 session.[18] The reforms in the Bill will make it easier to obtain a trade mark and sweep away many of the current and admittedly not very logical restrictions. Neither the Directive nor the Bill goes as far as some proposals for extending the scope of trade mark law. For both, a trade mark may consist of "any sign capable of being represented graphically", which includes containers such as Coca-Cola bottles;[19] but there have been proposals to include olfactory material, sounds and holograms amongst the badges of identity to which traders may claim exclusive rights.[20] But the Bill does provide at least one significant extension in that where the distinctive elements of a registered trade mark consist of or include words, the trade mark may be infringed by the spoken use of those words as well as by their visual representation.[21]

16. See the Semiconductor Products (Protection of Topography) Regulations 1987 (SI 1987/1497), replaced by the Design Right (Semiconductor Topographies) Regulations 1989 (SI 1989/1100, amended by SI 1991/2237, SI 1992/400 and SI 1993/2497); and the Copyright (Computer Programs) Regulations 1992 (SI 1992/3233).
17. For the Directive see 89/104/EEC, OJ, L40, 11.2.89, p 1. The Community Trade Mark Regulation (for which see OJ, L11, 14.1.94, p 1) will come into force in April 1994. The Community Trade Mark Office will be located in Alicante, Spain, and its official languages will be English, French, German, Italian and Spanish, although an application may be filed in the language of any Member State.
18. See 541 HL Deb cols 88-90 (8 December 1992).
19. See Article 2 of the Directive and clause 1(1) of the Bill. Bottles and containers could not be registered as marks under the 1938 Act: *Re Coca-Cola's Application* [1986] 2 All ER 274 (HL). I understand that on the day after the date by which the Directive should have been implemented in the UK the Coca-Cola company applied for registration of its bottle as a mark under the Directive.
20. The Draft Trade Mark Law Treaty being prepared under the auspices of the World Intellectual Property Organisation (HM/CE/V/2) currently provides in Article 2(a) that the Treaty "shall apply to marks consisting of visible signs"; and in Article 2(b) it is further provided that it "shall not apply to hologram marks and to marks not consisting of visible signs, in particular sound marks and olfactory marks". TRIPS Article 15(1) provides that "members *may* require, as a condition of registration, that signs be visually perceptible" (emphasis supplied).
21. Clause 9(6).

PRODUCERS V USERS

The general trend of expanding intellectual property rights which has been illustrated by the foregoing paragraphs has stimulated a debate between the producers who benefit from intellectual property and those who either seek to compete with them or to use the protected product. The two latter groups see their freedom of action, which may be desirable in certain respects, circumscribed by the protection of the producer's actions, while the producer argues that without the protection the costly skill and effort which went into the product will not be recouped, and accordingly there will be no incentive to develop new ideas and materials. Often, of course, the protagonists in the debate are both producers and users. Academics are a good example: producers who benefit from intellectual property, and also users who frequently find themselves irritatingly restricted by the costs and procedures which its recognition necessarily entails. The debate thus resolves not so much into a question about whether or not we should have intellectual property as much as what scope it should have and to what subject-matter the various forms of right may be properly applied.

COPYRIGHT QUESTIONS AND THE EUROPEAN COMMUNITY

Biotechnology and the patentability of living matter raise these kinds of questions very obviously, but here we now turn to the law of copyright, and examine its scope in the light of a number of developments which are either about to occur or are under active discussion. The main driving force behind this is the European Community. In 1988 the European Commission published its Green Paper, *Copyright and the Challenge of Technology: copyright issues requiring immediate action.*[22] This dealt with the following topics: the general problem of repressing copyright piracy; the problem of audio-visual home copying; distribution right, exhaustion of rights, and rental right; computer programs; and databases. In 1990 the Commission announced a Copyright Action Programme,[23] which has been followed by a steady stream of draft and concluded Directives.

The first, and the one over which there was the greatest public controversy, was that already referred to on the copyright protection of computer programs; the Directive, which was finalised in May 1991, was implemented in the United Kingdom by the Copyright (Computer Programs) Regulations 1992, which came into force on 1 January 1993.[24] The great expansion of the use of computers in the 1970s and the ease with which copies of computer programs — the instructions which make machines operate in particular ways — could be made by pirates made it inevitable that the original producers would seek legal protection against piracy in the way already familiar in the world of sound recordings. Copyright came to be the

22. COM(88) 172 final (June 1988).
23. COM(90) 584 final (December 1990).
24. The Directive is OJ, L122, 14.5.91, p 42; the Regulations are SI 1992/3233. See on the background to the Directive Lehmann and Tapper (eds) *A Handbook of European Software Law* (Oxford, 1993).

preferred mode of protection in the western world.[25] Computer programs as such were generally expressly excluded from patent protection because, being essentially instructions to a machine based on mathematical calculations, a patent monopoly would be wholly inappropriate.[26] There was anyway a difficulty, given the way in which the computer program market had developed. The computer hardware market was dominated by a few companies such as IBM and Apple Macintosh. On the software side, therefore, the aim was to produce programs which would run on this hardware. Program producers accordingly analysed the programs which ran on the main producers' machines in order to be able to produce their own, compatible programs. Similarly whenever a successful program appeared, competitors would engage in the same process to produce a rival version. It is therefore doubtful whether most new programs appearing on the market are sufficiently inventive to be able to claim patent protection, even assuming that such protection is appropriate to the basic subject-matter.

Copyright came to be the preferred form of protection for various reasons. First, it was automatic; no cumbersome registration process had to be undergone before the right could be claimed. Second, the classic copyright test of originality was much less demanding than the inventiveness required for a patent; derivative works might have copyright so long as there was an input of skill and labour to achieve an independent form of expression. Third, there was written material involved in the preparation of computer programs — the algorithms and the source code, which preceded the program's rendering in machine-readable language (the object code) — which made them analogous to literary works. Similarly the screen output was generally literary or graphic in character. Finally, and most advantageously from the point of view of producers, the international framework of copyright under the Berne Convention meant that the automatic protection would arise throughout most of the world. It is of course far from clear whether the Berne concept of works of authorship covers computer programs, but work has begun on a revision of Berne to make the point explicit, and there is also express provision in the TRIPS agreement.[27]

The deployment of copyright to protect programs has been criticised, however. An obvious point is that the length of the copyright term — under the Berne Convention, at least the lifetime of the author plus 50 years in the case of a literary work — greatly exceeds the period for which protection is necessary, given the relatively short "shelf-life" of even the most successful programs.[28] Given also that most programs are derived from earlier programs, the fine borderline between copying — the primary act

25. See Dreier, 'The international development of copyright protection for computer programs', in Lehmann and Tapper (eds), *supra*, n 24, pp 217-38.
26. Dworkin (*supra*, n 13), p 133.
27. See Article 10(1) of TRIPS; also Cornish, 'Computer program copyright and the Berne Convention', in Lehmann and Tapper (eds), *supra*, n 24, pp 183-201. See further, MacQueen, 'Protecting software — copyright or *sui generis*?' (1993) 1 *International Journal of Law and Information Technology* 236, which gives additional references.
28. See further below, text at notes 66-74.

restricted by copyright — and merely deriving, was bound to become an issue. In the United States, a series of cases beginning with *Whelan* v *Jaslow Dental Laboratories*[29] in 1986 raised the question of whether copyright protection extended beyond the expression of the program *per se* to cover the way in which it gave "structure, sequence and organisation" to the data it contained, and its "look and feel", that is to say, roughly, the way in which it operated and interacted with the user. This was a new version of an old argument, the extent to which copyright covers ideas as well as their expression.[30] But since most software producers were seeking to produce programs which were either compatible with or "looked and felt" the same as other programs, the wider interpretation of copyright raised the prospect of certain producers obtaining effective and very long monopolies in their products. This issue is now beginning to be ventilated in British courts, and the most recent case, *John Richardson Computers Ltd* v *Flanders and Chemtec Ltd*,[31] has adopted an approach which, while not confining copyright to the literal expression of the program, looks at the substantiality of what has been taken in judging whether infringement has occurred. The problem of defining those parts of programs which are, so to speak, the language of software so that copyright protects only the parts which are genuinely original to the first creator is thus a very live one now on both sides of the Atlantic.

The Community intervened in this minefield to ensure that all member States protected programs by copyright because, given the extent to which American companies dominated the production of hardware, it saw the production of software rather than hardware as the area in which it was most likely that European firms would be making a successful investment in the future. But at the same time it was recognised as important so to define the rights arising that the possibility of monopoly and the destruction of large parts of the software industry were avoided.[32] So the Directive provided in its recitals and in Article 1 that only the expression of a program was protected and not its ideas and principles, in particular those underlying its interfaces. "Interoperability", as the Directive put it, was to be allowed. Accordingly under Article 5(3) a lawful user of a program is entitled to observe, study or test the functioning of the program in order to determine the ideas and principles underlying any element of it. By Article 6, where reproduction of the program and translation of it into a human-readable form (decompilation) is indispensable to obtain the information necessary to achieve the interoperability of an independently created computer program

29. 797 F 2d 1222 (1986); also [1987] FSR 1. The leading cases are well discussed in Miller, 'Copyright protection for computer programs, databases, and computer-generated works: is anything new since CONTU?' (1993) 106 *Harvard Law Review* 994.
30. The idea is embodied in Article 9(2) of TRIPS: "Copyright protection shall extend to expressions and not to ideas, procedures, methods of operation or mathematical concepts as such".
31. [1993] FSR 467 (Chancery Division, Ferris J).
32. On this see Sucker, 'The Software Directive — between the combat against piracy and the preservation of undistorted competition', in Lehmann and Tapper (eds), *supra*, n 24, pp 11-24; Wilkinson, 'Software protection, trade, and industrial policies in the European Communities', in *ibid*, pp 25-38.

with other programs, there is no infringement in such reproduction, provided that it is by a lawful user in order to achieve interoperability.

These rules, with the interesting exception of the Article 5(3) entitlement to observe, study or test in order to determine underlying ideas and principles, are now embodied in United Kingdom law in the Copyright (Computer Programs) Regulations 1992, which amends the Copyright, Designs and Patents Act 1988. Their form as expressed in the Directive is the compromise reached after a great struggle between the major American computer companies, which favoured an undiluted copyright, and the European software producers, which recognised that their activities could be seriously limited if the American lobby was successful in eliminating decompilation.[33] The legislative compromise seems to reflect a feeling of unease about the application of copyright in this field; an unease which has been caught in a recent comment by Professor Cornish that "the whole purpose of a [computer] program differs from that of a book; its object is not to communicate the expression of ideas to humans for their information, education or entertainment; programs cause a machine to function".[34] Copyright, at least in its traditional guise, does not seem quite to fit the need for protection that computer programs have; hence the need to play around with the introduction of special rights to decompile and other user rights conferred by the Directive and the 1992 Regulations not so far mentioned, such as the right to make back-up copies and the right to "debug", that is, correct errors in the program.[35]

There are several other copyright Directives at varying stages of the Community legislative process: for example, on rental right,[36] the protection of databases,[37] the term of protection of copyright,[38] and the co-ordination of the rules of member States concerning copyright and related rights applicable to satellite broadcasting and cable retransmission.[39] Finally, the Commission has begun discussions on whether there is a need to harmonise the rules of Member States on the subject of moral rights in copyright works. Few of these have attracted the controversy which dogged the Computer Program Directive. Yet all raise issues about the impact of extending intellectual property on users and competitors of the original producer.

The most advanced proposal is that on rental right, which was finalised towards the end of 1992. Here again producer hands are strengthened. Rental is a new form of exploitation, being especially relevant to videos,

33. On this see Vinje, 'The legislative history of the EC Software Directive', in Lehmann and Tapper (eds), *supra*, n 24, pp 39-142.
34. Cornish, 'Intellectual property and international relations' (1993) 52 *Cambridge Law Journal* at 57-8.
35. For a vigorous defence of copyright in computer programs which also provides a comprehensive and up-to-date analysis of the US case law, see Miller, *supra*, n 29.
36. EC Council Directive 92/5100, OJ, L346, 27.11.92, p 61.
37. The latest version of the Directive was published on 4 October 1993: COM(93) 464 final — SYN 393 (OJ, C308, 15.11.93, p 1).
38. OJ, L290, 24.11.93, p 9.
39. OJ, L248, 6.10.93, p 15.

sound recordings and computer programs, and producers have been given control of the market (an approach also found in the TRIPS agreement[40]). The case of *Warner Bros* v *Christiansen*,[41] in which the producer of a video sold in the United Kingdom (where there was then no rental right) was held able to stop rental of the copy in Denmark (where there was a rental right), showed, however, that there was a need to harmonise the disparate national laws of the Community, which would otherwise form a barrier to the free movement of goods, as well as hampering the effective exploitation of certain types of intellectual property. Under the 1988 Act, rental right was recognised for the first time in respect of videos, sound recordings and computer programs,[42] but the Directive will necessitate amendment because it extends the protection to all forms of copyright work except buildings and works of applied art.[43]

A similar argument has now begun about the copyright in databases. Under the proposed Directive on this subject, databases would be protected by copyright.[44] There is no doubt that a computerised database is already capable of having copyright in United Kingdom law. The 1988 Act, like its 1911 and 1956 predecessors, expressly confers copyright on compilations of information as literary works.[45] There have been many cases, and copyright has been held to exist in, for example, timetables, football fixture lists, TV programme schedules, and directories of solicitors and barristers.[46] On the face of it, therefore, databases present little problem. They are simply compilations which are accessible by computer, and they have copyright. The Community's intervention is again justified by the fact that compilations receive variable protection under the laws of the various Member States, and by the significance of databases in European industry as both a producer and a user.[47] The Commission's explanatory memorandum accompanying the first draft of the Directive stated that one-quarter of the world's accessible on-line databases are of European origin compared with a US world market-share of 56 per cent.[48] The variability of the legal protection of compilations in the Community has been carefully documented in a recent article by Vincent Porter.[49] He shows that the variability is to be explained by what he terms the "fudge"[50] on the subject of Article 2(5) of the Berne Convention, which allows copyright protection of "collections" of literary or artistic works "which, by reason of the *selection and*

40. Article 11 (in respect of at least computer programs and cinematographic works).
41. Case 158/86, [1988] ECR 2605.
42. Copyright, Design and Patents Act 1988, ss 18(2), (3) and 66.
43. See Articles 1 and 2(3) of the Directive.
44. See *supra*, text at note 37.
45. Copyright, Designs and Patents Act 1988, s 3(1)(a); cf Copyright Act 1956, s 48; Copyright Act 1911, s 35(1).
46. *Leslie* v *Young* (1894) 21 R (HL) 57; *Football League Ltd* v *Littlewoods Pools Ltd* [1959] Ch 637; *Independent Television Publications Ltd* v *Time Out Ltd* [1984] FSR 64; *Waterlow Directories Ltd* v *Reed Information Systems Ltd* [1992] FSR 409.
47. See the Commission's Green Paper, *Copyright and the Challenge of Technology*, *supra*, n 22, chapter 6.
48. COM(92) 24 final — SYN 393 (13 May 1992), para 1.1.
49. 'The copyright protection of compilations and pseudo-literary works in EC Member States' (1993) *Journal of Business Law* 1.
50. *Ibid*, p 22.

arrangement of their contents, constitute *intellectual creations*". Article 2(5) gives two examples of such "collections": encyclopedias and anthologies.[51] The draft Directive states that "Member States shall protect databases by copyright as collections within the meaning of Article 2(5) of the Berne Convention".[52] It may be noted in passing that the TRIPS agreement also provides for the protection of databases using the language of Article 2(5).[53] But it is not clear that lists of informational data as such meet the Berne criteria, inasmuch as the material collected may not be literary works in their own right, and there may not be selection and arrangement sufficient to constitute an intellectual creation. Porter summarises the current position on compilations thus.[54]

> Only two Member States, Belgium and Luxembourg, limit protection to collections which fulfil both criteria laid down in the Berne Convention. Another two, Germany and Italy, only afford protection if the second criterion is fulfilled, namely that the collection is an intellectual creation in its own right. One Member State, Denmark, affords a lower level of protection to simple collections of facts. Six Member States, France, Ireland, Netherlands, Portugal, Spain and the United Kingdom, all afford full protection to simple collections, regardless of whether the collection is an intellectual creation in its own right; although three of them, France, Portugal and Spain, also require publication. The law of Greece is virtually silent on the matter.

Further debate about the protection of compilations has been sparked by the recent decision of the US Supreme Court in *Feist Publications Inc* v *Rural Telephone Service Company Inc*[55] that a telephone directory did not have copyright. The rationale of the decision was that the accumulation of a list of the names, addresses and phone numbers of all the customers of a telephone company and their publication in alphabetical order did not constitute sufficient originality to justify a claim of copyright. The Supreme Court rejected a "sweat of the brow" test of originality, somewhat akin to the UK "skill and labour" approach to the same issue. Justice Sandra Day O'Connor, giving the opinion of the Court, preferred a test of creativity, rather echoing the Berne concept of "intellectual creation". Mere effort to accumulate information was not enough to support copyright in the result.

Probably the decision on the facts in *Feist* would not be followed in the United Kingdom, although there are some parallels with the refusal of the Privy Council to find originality as the result of labour alone in the *Interlego* case in 1988, and perhaps with an earlier decision of the Court of Appeal that the labour and investment which had gone into producing a new single-word company name did not confer copyright on that word.[56] But the point of the case which may be stressed is the unease which it manifests with the

51. For the text of the Berne Convention see *Copinger and Skone James, supra*, n 2, Appendix C-1-49.
52. Article 1.
53. Article 10(2): "Compilations of data or other material, whether in machine readable or other form, which by reason of the selection or arrangement of their contents constitute intellectual creations shall be protected as such".
54. Porter, *supra*, n 49, p 4.
55. 113 L Ed 2d 358 (1991).
56. See *Interlego* v *Tyco Industries* [1989] AC 217 (PC) and *Exxon Corporation* v *Exxon Insurance* [1982] RPC 69 (CA).

application of copyright protection to certain types of work. Just as with the protection of computer programs there is the danger of copyright being held to exist in ideas, so with compilations there is the danger of copyright being held to exist in information.

It is certainly worth noting that unease of this kind was also clearly felt in the long saga over the copyright in TV programme schedules, which in the United Kingdom at least came to an end only in 1992. As already indicated, it was held as long ago as 1926 that there could be copyright in broadcasting programme schedules as compilations,[57] and for many years this was the basis upon which first *Radio Times* and later *TV Times*, both published by the broadcasting organisations putting out the programmes, established their positions as the only magazines to give advance programme listing for a full week.[58] But in the early 1980s this duopoly came under challenge from magazines and newspapers such as *Time Out*, which began to publish weekly listings thinly disguised as critiques of the coming week's viewing and listening and thus claiming protection under fair dealing provisions in the copyright legislation. The copyright was upheld in the courts but the matter then went to the Monopolies and Mergers Commission. The Commission split evenly on the central issue of whether or not the duopoly operated in the public interest, and no action was taken by the British Government at that time.[59] But then complaint was made to the European Commission, which ruled in 1988 that the refusal of the broadcasting organisations to license other publishers to produce advance weekly listings was an abuse of a dominant position contrary to Article 86 of the Treaty of Rome.[60] This ruling was upheld by the Court of First Instance in 1991, and although it has been appealed again to the European Court of Justice it seems likely to be confirmed once more.[61] Meantime the British Government has finally acted to remove the legal basis of the duopoly in UK copyright law, not by denying copyright to compilations but by providing under the Broadcasting Act 1990 for a kind of compulsory licence enabling other publishers to produce their weekly listings while paying a royalty to the broadcasting organisations.[62] The last twist in the tale in Britain was the dispute about the amount of the royalty, the first case before the new Copyright Tribunal established by the 1988 Act. The matter was settled out of court before the conclusion of an appeal from the Tribunal's decision, with the royalty fixed at 0.004p a copy with a £250 minimum, amounts respectively 0.001p and £50 more than determined by the Tribunal in its decision.[63]

57. *British Broadcasting Corporation* v *Wireless League Gazette Publishing Co* [1926] Ch 433.
58. *Independent Television Publications Ltd* v *Time Out Ltd* (1984] FSR 64.
59. Monopolies and Mergers Commission, *The British Broadcasting Corporation and Independent Television Publications Ltd.* (Cmnd 9614, 1985).
60. *Magill TV Guide Ltd* v *Independent Television Publications Ltd, British Broadcasting Corporation and Raidio Telefís Eireann* [1989] 4 CMLR 757.
61. Case T-69/89, *Raidio Telefís Eireann* v *Commission* [1991] ECR II-485; [1991] 4 CMLR 586. For the appeals see OJ, C307, 27.11.91, pp 5-6 (Cases C-241/91 and C-241/91).
62. Broadcasting Act 1990, s 176 and Sch 2.
63. For the decision of the Copyright Tribunal and the terms of the final settlement, see *News Group Newspapers Ltd* v *Independent Television Publications Ltd* [1993] RPC 173.

Here again there is evidence of unease with the power conferred by unfettered copyright, worked out primarily through the competition laws. Yet the Draft Directive proposes a fairly sweeping copyright for databases, and adds a right to prevent unauthorised extraction of the whole or a substantial part of the database, irrespective of the eligibility of the database for copyright protection. This latter right lasts until 15 years after the database is first lawfully made available to the public and is therefore shorter than the copyright which protects the database generally.[64] Nonetheless, in giving protection to material which otherwise would have no protection, it clearly extends intellectual property into new areas. There is some recognition of the dangers of going too far with protection, and thus enabling the generators and holders of information to control its dissemination for their own benefit alone, however: where the information in the database cannot be independently created, collected or obtained from any other source (the TV programme listing problem), the right to extract and reutilise shall be licensed on fair and non-discriminatory terms.[65]

The final point concerns the European Commission's proposals on the term of copyright. Here another Directive has worked its way through the Community's legislative processes. In most of the Member States, including the United Kingdom, the proposals will extend copyright significantly. For works of authorship, the period will become lifetime plus 70 years, while for the media copyrights the period will be 50 years from the date of publication. The case of *EMI Electrola* v *Patricia Im- und Export*[66] made apparent the need for harmonisation of the rules on copyright terms. In that case sound recordings in which the copyright had expired in Denmark were lawfully manufactured in Denmark without the former copyright owner's consent and exported from there to Germany where, owing to the longer term of copyright which recordings received under German law, the original recordings continued to enjoy copyright. It was held that the copyright owner in Germany could still stop the import of the recordings lawfully made in Denmark, since the process of manufacture there without his consent did not exhaust his rights in Germany.

The basis for taking lifetime plus 70 years as the harmonised term for the Community is that this is the period in Germany and soon also in Belgium and Greece, while Spain gives 60 years *post mortem auctoris*. To adopt the lifetime plus 50 years formula which is standard elsewhere in the Community would therefore deprive some copyright owners in the Community of some of the benefit of their property. Although the Rome Convention on neighbouring rights only provides for a minimum protection period of 20 years,[67] the 50-year period for media copyrights is more or less standard, and is provided for in the TRIPS agreement;[68] it will however

64. Article 12.
65. Article 11(1).
66. Case 341/87, [1989] ECR 79.
67. For the text of the Rome Convention, see *Copinger and Skone James, supra*, n 2, Appendix C -121-155.
68. Article 12.

significantly increase the period for which sound recordings are protected in Germany, which currently gives only a 25-year period of protection.

The proposal has however met with much criticism. Immediately before the publication of the first draft Directive, the signs were that the already lengthy periods of copyright were coming under fire.[69] Copyright has traditionally been seen as a "natural" right pertaining to an author, and therefore since the nineteenth century the period of protection has been linked to the author's lifetime. The extension into a posthumous period has been justified on the basis that work unpublished at death remains capable of earning a return and that the author's family, which may have suffered for his art, benefits as a result; in Britain, the copyright period was first extended in this way for the sake of the family of the poet Wordsworth.[70] One could also raise the question of why an author's mature work should be protected for a much shorter period than perhaps less impressive early material. Certainly a restriction of copyright to the author's lifetime alone might well work injustices of various kinds. But the 50-year period of posthumous protection has come to seem much too long, and certainly not justified in terms of enabling most types of copyright work to earn their fair reward. As Cornish has commented,[71]

> though copyright acts as a basic prop for the publishing, recording, film and broadcasting industries, the right is by common consent given for a period far longer than is needed to persuade doubting entrepreneurs to invest in the initial commercialisation of works of which the public might otherwise be deprived. Investment decisions are not calculated upon distant prospects but upon predictable returns over relatively short periods. The earnings of even 20 years hence have only the most heavily discounted present value.

We might contrast the supplementary protection certificate in pharmaceutical patents, where a case had been made out for extending the period of protection founded on reasonably well-worked out economic grounds.

The issue of term has been most sharply focused, as already noted, by the copyright protection of computer programs. It is clear that the traditional period is much longer than is needed to enable the creator of a program to earn the rewards his authorship deserves. Within a very short period the program will be superseded by others, perhaps created by the originator himself. Indeed, probably all his effort will be devoted to working out sufficient improvements on the program to enable a new version of it to take over in the market place. Yet the European Commission is happy to extend the lifetime plus 70 years formula to computer programs. One might also raise the question of whether a 50-year period is appropriate to the media copyrights, and the lengthy control of the large market in videos and sound recordings thereby given to producers. Is this period really necessary? In

69. Breyer, 'The uneasy case for copyright: a study of copyright in books, photocopies and computer programs', (1970) 84 *Harvard Law Review* 281; Puri, 'The term of copyright protection — is it too long in the wake of new technologies?', [1990] 1 EIPR 12.
70. MacQueen, *Copyright, Competition and Industrial Design* (David Hume Institute, 1989) p 7.
71. Cornish, *supra*, n 34, p 51.

only a very few cases will the protection confer a significant return for the whole period, and it must be doubtful, as Cornish points out, whether this kind of "after-market" was or is in the contemplation of the original producers as part of the way in which their investment would be recouped. To take a simple example, the makers of *Casablanca* are unlikely to have foreseen the development of its cult status or based financial calculations upon repeated showings of their work on television and rental of videos. It has been said that an unduly long term of protection does not matter: "it is entirely harmless economically, because a product which no longer finds demand on the market also does not hinder competition".[72] But this has drawn the reply, "so far as we can see, this is of course true; but we cannot see very far".[73] Should computer program technology stabilise and standardise at some point in the future, then under the proposed law the copyright owners will be in a position to dominate the market for very lengthy periods indeed.

It is interesting to note the rather confused reflections of the Economic and Social Committee on the Commission's proposals.[74] The Committee argues that there is a trend to extend the period of copyright protection, and that in view of increased life expectancy, it is appropriate to extend the period of posthumous copyright, the aim of which is to benefit the author's descendants. But the Committee also points out that extending the period of protection will not facilitate access at affordable prices to cultural and informational material, and that it will lead to an increase in piracy. As 90 per cent of the Berne countries currently opt for a 50-year posthumous period, that probably provides a better basis for an international harmonisation. The Committee therefore concludes that a world-wide harmonisation should be sought, and that serious consideration should be given to the adoption of the 50-year rather than 70-year period. The Commission has nonetheless held fast to its original position.

CONCLUSION

It is clear that the European Community is now well embarked upon a programme of intellectual property law reform, driven by the need to protect and enhance the position of European industry and commerce in world markets, and to create the conditions necessary for a single European market. This will be reinforced by the TRIPS agreement. But all this has raised fundamental questions about intellectual property itself. Should patents extend to living matter? Should computer programs and databases have copyright, and if so for how long? What periods of protection are appropriate for patents and copyright, assuming that a principal aim of the whole system is to earn a return for the inventors and creators of this world, commensurate of course with the value which consumers of the end-product

72. Lehmann, 'The European Directive on the protection of computer programs', in Lehmann and Tapper (eds), *supra*, n 24, p 179.
73. Cornish, *supra*, n 27, p 194.
74. COM(92) 33 final — SYN 395 (1 July 1992).

place upon it? At the most basic level, do we need intellectual property at all? Are the conditions of a competitive market-place, coupled with freedom of contract, not enough to be an incentive to create and invent and to earn a reward therefrom? It has been said that patents are often of extremely limited value, and the same may be said of many copyrights — academic ones, for example. There are equally plenty of instances of market-places which thrive although intellectual property plays only a limited role or none at all. One such is that of character and personality merchandising, another the live broadcasting and recording of sporting events, both of which have flourished remuneratively for those putting the product on the market despite many uncertainties about the application of intellectual property to the subject matter. My own view, for what it is worth, is that intellectual property has a role to play but that it requires constant review in the light of changing circumstances; on that basis, I feel that the investment of skill and labour which I have made in the subject to date will continue to earn a return for me, if not for my descendants.[75]

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75. Earlier versions of this paper were presented to the Scottish Law Faculties Annual Conference 1993, the Scottish Lawyers European Group, and a Law Society of Scotland Update Seminar. I benefited greatly from the comments and questions on each of these occasions.

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